

WHAT IS CLAIMED IS:

1. A monitoring system for use in a pipe line constituting a first pipe through which a liquid passes positioned and contained within a second pipe having an inside diameter greater than an outside diameter of the first pipe to provide an annular through passage surrounding the first pipe, the system comprising:
  - a fitting connected to the second pipe;
  - said fitting having at least one port connected to said annular through passage via an annular passage surrounding said through passage of said fitting;
  - said port being connected to means for detecting liquid leakage from said first pipe.
2. The monitoring system of claim 1, wherein said means for detecting liquid leakage from said first pipe includes means for monitoring vacuum within said annular passage and producing a signal indicating liquid leakage upon a vacuum reduction.
3. The monitoring system of claim 1 or claim 2, wherein said pipe line is connected at one end thereof to an underground liquid storage tank and at another end to an above ground liquid dispenser.
4. A monitoring system for leak prevention and leak detection in a pipe line constituting a first pipe through which a liquid passes positioned and contained within a second pipe having an inside diameter greater than an outside diameter of the first pipe to provide an annular through passage surrounding the first pipe, the system comprising:
  - a fitting connected to the second pipe;

said fitting having a through passage in liquid connection with said first pipe;

said fitting having a first port and a second port connected to said annular through passage via an annular passage surrounding said through passage of said fitting;

said first port being connected to means for detecting liquid leakage from said first pipe to said annular through passage surrounding said first pipe and;

said second port being adapted for removal of liquid leakage from said annular through passage.

5. The monitoring system of claim 4, wherein said means for detecting liquid leakage from said first pipe includes means for monitoring vacuum within said annular through passage and producing a signal indicating liquid leakage upon any vacuum reduction.

6. The monitoring system of claim 4 or claim 5, wherein said second port is connected to a liquid container to prevent liquid leakage from entering ambient environment.

7. The monitoring system of claim 6, wherein said pipe line is connected at one end thereof to an underground liquid storage tank and at another end to an above ground liquid dispenser.

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